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Initiating U.S. Free Trade Agreements: How Do Potential Partners Stack Up?

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Abstract
The United States has recently initiated free trade agreement negotiations with a host of countries across the world. Choosing potential partners is based at least in part on the economic consequences of pursuing agreements with a country or group of countries. Since computable general equilibrium models for dozens and dozens of countries may not be feasible because of data availability, this research uses a gravity equation approach to rank over 150 countries based on goods trade and U.S. outward foreign direct investment.

Introduction

The United States has long been a major supporter of a multilateral approach to international trade negotiations in the post World War II era. Both Democratic and Republican administrations have played key roles in successful conclusions of multilateral trade agreements starting with the Annecy Round (completed in 1948), through the Kennedy Round (1967), Tokyo Round (1979), and, most recently, the Uruguay Round (1993). This approach reflected a post-war U.S. approach that emphasized non-discrimination as a fundamental basis for international trading relations and looked skeptically on the desirability of preferential trade agreements.

In contrast, a number of other countries have concluded bilateral and plurilateral agreements, including the British imperial preferences, the European Common Market, the Andean Community, Mercosur, and the East African Community. These agreements were often seen as a way to bind countries together as a means to reach foreign policy, national security, or regional cooperation goals.

In more recent years, the U.S. has begun to shift its attitudes towards preferential agreements. The first U.S. Free Trade agreement (FTA) was signed in 1985 with Israel. Canada followed shortly after in 1989 and was then joined by Mexico in the North American Free Trade Agreement in 1994. An FTA with Jordan (2000) concluded this first round of bilateral expansion. These agreements were negotiated either with major U.S. trading partners that were also neighbors, such as Canada and Mexico, or strategic allies in the Middle East, like Israel and Jordan.

This process has expanded dramatically under President George W. Bush and his Trade Representative, Ambassador Robert Zoellick. Agreements have been concluded and approved by Congress beginning with Singapore and Chile in 2003[1] and continuing with Australia and Morocco in 2004. Agreements are either near completion or have begun for U.S. FTAs with a number of countries including Bahrain, Central America (El Salvador, Costa Rica, Guatemala, Nicaragua, Honduras, and the Dominican Republic), the South African Customs Union (Botswana, Lesotho, Namibia, South Africa and

[1] Negotiations with Chile and Singapore began under President Clinton.

Swaziland), Oman, Panama, Thailand, the United Arab Emirates, and a group of Andean countries (Columbia, Peru, Ecuador, and Bolivia).

The variety present among the United States' current and future FTA partners leads one to ask why certain countries or groups of countries are chosen as partners when others are not. This research paper helps to answer this question by ranking over 150 countries as potential free trade partners based on trade in goods and outward U.S. direct investment flows. The results will not only help assess how the current set of FTA partners stack up against each other, but also to evaluate the importance of different groups of countries and potential future FTA partners.

Ranking countries as possible FTA partners has clear policy and economic implications. Critics have called into question whether the current group of FTAs will yield meaningful economic benefits to the United States. They have questioned why these particular countries have been chosen as FTA partners when other economically important partners such as the EU, Brazil, Korea, and Japan, are not on the current list. Some Democratic critics have argued that foreign policy concerns have been more important in picking partner nations than U.S. economic interests. For example, agreements with Bahrain and Morocco, these critics contend, will provide very insignificant economic benefits to the U.S. This position is consistent with results from computable-general-equilibrium modeling of these agreements by the U.S. International Trade Commission (ITC).[2] Others point to the agreement with Australia (a supporter of the Bush policy in Iraq) and the lack of negotiations with New Zealand (a vocal critic of the same policy) as evidence that foreign policy considerations dictate U.S. choice of FTA partners.

The Bush administration has responded by arguing that the choice of partners is part of a strategy of "competitive liberalization." The argument is that the two major multilateral trade negotiations currently underway, the WTO Doha Round and the Free Trade Agreement in the Americas (FTAA), are more likely to be completely successfully if countries believe that the U.S. will conclude bilateral

[2] The ITC's model suggests that eliminating trade restrictions with Morocco would increase US welfare by less than $132 million, or less than 0.005 percent of GDP (ITC (2004b, p. xvi). A similar model arrives at an even smaller $19 million increase in US welfare as a result of a Bahrain agreement (ITC (2004a, p. xiv). Neither estimate considers the effect on services and investment.

agreements with other countries. Fearing that they will be left out when their neighbors are granted inreased access to the U.S. market, recalcitrant countries will make the necessary compromises needed to conclude these other major agreements. This approach suggests that the specific economic benefits of a particular agreement are less important than the negotiating benefits that arise from them. For example, the benefits of an agreement with Singapore may include both putting pressure on other South East Asian countries to cooperate in a regional FTA with the U.S., thereby setting higher standards for later agreements, as well as solidifying strategic negotiating partners in multilateral agreements. Similar arguments might be made that FTAs with non-Mercosur Latin American countries may put pressure on Brazil to conclude a comprehensive FTAA.

Regardless of whether one accepts one of these justifications for bilateral agreements, policy makers must still choose among potential partners. The aim of this paper is to provide some insight into the choice of potential partners by rank-ordering potential FTA partners. The intent is not to ascertain whether, or by how much, any of the particular agreements will increase U.S. economic welfare but instead to create an ordered list showing which FTA partners would provide the greatest relative increase in U.S. trade and investment opportunities. The process uses a gravity equation setup to rank 154 countries in terms of their potential trade in goods and direct investment with U.S.

The paper is organized in the following way; section two includes an outline of the relevant literature and the modeling approach. We describe data sources and descriptive statistics in section three and section four contains estimation results as well as a short discussion of selected country rankings and various scenarios. Concluding remarks are contained in section five. Complete rankings of all countries analyzed in the study can be found in the Appendices.

Section 1: Literature Review and Methodology

The analytical tool employed for this analysis is the "gravity model," a well-known and frequently-used approach in the empirical trade literature. This approach presumes that bilateral trade (in goods and direct investment) depends on various economic factors as well as measures of "friction," such as physical distance, that reduce economic interaction.

A particular virtue of the gravity model in the current context is that it requires far less information than other popular models used to estimate bilateral trade flows, especially computable general equilibrium models (CGE). CGEs require significant amounts of data for each examined country (e.g., sector-specific demand and supply elasticities, cross-price elasticities, and corresponding input-output tables for each country) and considerable assumed structure on the economic relationships under investigation. Such informational requirements would be especially cumbersome, and even insurmountable, when trying to analyze trade between the U.S. and over 150 potential partners. Since the U.S. has been negotiating FTAs with relatively small economies, the gravity equation approach will be a useful, if incomplete, substitute for more extensive modeling.

A downside of using a gravity equation formulation is that the resulting estimates say nothing about consequences for economic welfare, wages, payments to capital, or sector-specific adjustment to liberalization. Instead, the gravity equation uses only aggregate flows and will only be used to rank countries in relation to each other.

The gravity equation has long been used to examine international trade flows. Tinbergen (1962) and Pöyhönen (1963) applied the model long before Anderson (1979) helped establish a theoretical underpinning. More recently, Deardorff (1995) showed that gravity equations may be interpreted in a way consistent with many standard international trade theory models, such as the Heckscher-Ohlin model. Refining this idea, Evenett and Wolfgang (1998) determined that a combination of the Heckscher-Ohlin model and the Increasing Returns model account for the gravity equation's success in predicting international bilateral trade flows.

The gravity model has been applied to liberalization of bilateral trade in many instances. Rajapakse and Arunatilake (1997) used gravity equations to estimate the benefits of reducing trade barriers among countries in South Asia. Paas (2000) used a gravity equation to model the trade potential of Estonia as a transition country newly opened to unrestricted international trade. Similarly, Tang (2001) studied the effects of a proposed free trade agreement among the member countries of ASEAN by using a gravity equation to estimate the post-agreement levels of intra-ASEAN trade.

Martinez-Zarzoso (2003) estimated a gravity model for bilateral trade flows among forty-seven different countries. This model was used to determine the potential trade that would be generated as a result of a free trade agreement between Mexico and the EU. Martinez-Zarzoso then uses this potential trade amount and the current trade volume to calculate the percentage by which exports from the EU to Mexico, Mexico to the EU and Spain to Mexico could grow given implementation of the FTA.

A recent paper by Stein and Daube (2004) considers a different measure of "trade friction" using the gravity equation. In particular, the authors look at the differences in time-zones as an alternative to simple geographical distance as an explanation of trade and FDI flows. They find that time-zone differences are better predictors of FDI flows than distance and argue that monitoring and management coordination are sensitive to being able to operate in similar time zones. We will adopt this in our analysis of FDI, as discussed below.

A generalized gravity model of international trade treats bilateral trade volume as a function of the countries' income (usually measured by gross domestic product), population, trade friction between trading partners and set of dummy variables that characterize attributes of the countries in question. The general equation for trade between the U.S. and a potential FTA partner j can be represented by:

$$E_{USij} = K_0 Y_{US}^{\lambda 1} Y_j^{\beta 1} P_{US}^{\lambda 2} P_j^{\beta 2} F_{US,j}^{\beta 3} A_1^{\beta 4 \ldots} A_N^{\beta N} \pi_{US,\,j} \qquad (1)$$

where E_{ij} is the volume of economic interaction between the countries i and j. K_0 is a positive constant, Y_{US} and Y_j are, respectively, the incomes of the U.S. and potential partner, P_{US} and P_j are the populations

of the U.S. and potential partner, and $F_{US,j}$ is a measure of friction that reduces economic interaction between the two countries. $A_1 \cdots A_N$ represent N separate potentially relevant attributes of the partner, and $\pi_{US,j}$ is a disturbance term. The exponents are constant parameters.

The empirical model is operationalized by taking logs of (1) and then applying ordinary least squares so that the coefficients can be interpreted as elasticities of "trade" with respect to the relevant explanatory variable:

$$\ln E_{US,j} = \beta_0 + \beta_1 \ln Y_i + \beta_3 \ln P_i + \beta_4 \ln F_{ij} + \Sigma \beta_n \delta_{jn} + \varepsilon_{US,j} \qquad (2)$$

where $\varepsilon_{US,j} = \ln \pi_{US,j}$. In this particular application, we will be measuring U.S. bilateral interaction with potential FTA partners so that U.S. employment and population remain constant and therefore subsumed into the constant term: $\beta_0 = \ln Ko + \lambda_1 \ln Y_{US} + \lambda_2 \ln P_{US}$. The term $\Sigma \beta_n \delta_{ijn}$ is the sum of each partner's attributes (converted to a dichotomous dummy variable) and then multiplied by their respective coefficient.

We are not testing any particular hypotheses about the relationships among the variables. Instead, we are using least squares simply as a means to fit the data. We will then apply the estimated coefficients to each country's data. The fitted value will be calculated by:

$$\text{FTARank}_{US,j} = \beta^*_0 + \beta^*_1 \ln Y_i + \beta^*_3 \ln P_i + \beta^*_4 \ln F_{ij} + \Sigma \beta^*_n \delta_{jn} \qquad (3)$$

where the starred coefficients denote their estimated value from the regressions. We will also be able to rank groups of countries by aggregating the data for the groupings, taking the log of the result (for non-dichotomous variables) and then multiplying by the appropriate estimated coefficients.

We will model goods trade and direct investment in this paper to reflect the fact that U.S. free trade agreements encompass a broad range of sectors.[3] [4] As a result, the following separate

[3] For a description of a "typical" US FTA negotiated under the Bush administration, see: "http://www.ustr.gov/Trade_Agreements/Bilateral/Chile_FTA".

[4] In principle, one would want to include bilateral services trade since this is such an important part of US exports; unfortunately, detailed services trade data are not available for a wide range of countries analyzed in this paper.

relationships are estimated and will form the basis of the rankings of potential FTA partners with the U.S.:

1) bilateral aggregate combined export and import goods trade (denoted by T, with corresponding coefficients denoted by τ):

$$T_j = \tau_0 + \tau_1 \ln Y_i + \tau_3 \ln P_i + \tau_4 \ln D_{ij} + \Sigma\, \tau_n \delta_{jn} + \nu_j \equiv T_j(\underline{\tau}) \qquad (4)$$

2) outward U.S. foreign direct investment (denoted by F with corresponding coefficients denoted by ϕ):

$$F_j = \phi_0 + \phi_1 \ln Y_i + \phi_3 \ln P_i + \phi_4 \ln Z_{ij} + \Sigma\, \phi_n \delta_{jn} + \rho_j \equiv F_j(\underline{\phi}) \qquad (5)$$

The resulting estimated coefficients are then multiplied by the corresponding explanatory variable data for 154 countries to yield the fitted values for each of the two categories for country j, denoted by $T_j[\underline{\tau}^*]$ and $F_j[\underline{\phi}^*]$, for goods and FDI, respectively, and where * denotes the vector of estimated coefficients."

One can then use these fitted values to rank the countries. The goods and FDI fitted values are not themselves comparable across categories. Consequently, a ranking was created by separately ordering both types of fitted values from 1 to 154, with 1 as the largest fitted value. The ranking for the two categories are denoted by $\text{Rank}T_j[\underline{\tau}^*]$ and $\text{Rank}\, F_j[\underline{\phi}^*]$, respectively. The final rank for country j is a simple average of the category rankings:

$$\text{Rank}_j = 1/2 \times (\text{Rank}T_j[\underline{\tau}^*] + \text{Rank}\, F_j[\underline{\phi}^*]) \qquad (6)$$

In essence, we are using OLS estimates to assess the "average" contribution of the independent variables in explaining bilateral goods trade and outward U.S. investment. We are then applying these estimates to underlying country-specific data so that we may assess how much trade there would be if each country's relationship with the U.S. was based on "average" outcomes.

Section 2: Data Sources

Data for 2002 is used in the analysis.

The dependent variables for the study are all obtained from the U.S. Bureau of Economic Analysis (BEA). Goods trade for 149 US trade partners was obtained for 2002 from BEA (2004a). We took the common approach in the literature and combined imports and exports as a dependent variable for goods trade. Outward U.S. foreign direct investment into 137 host countries was obtained from BEA (2003).

Country GDP data (in 2002 U.S. dollars) and total population were obtained from the World Bank's World Development Indicator tables (World Bank, 2004). Results from previous gravity equation studies would suggest a positive coefficient on GDP and a negative coefficient on population, which in essence predicts more trade and investment with countries with high per-capita-GDP.

Geographical distances between Washington, DC and other capital cities were obtained from either the Macalester College Department of Economics trade data page (Macalester, 2004) or, for those cities not listed there, from the USDA's "great circle distance" calculator (USDA, 2004). This measure of economic friction will be used for goods trade. Time zones were measured as being the absolute difference in hours between Washington, D.C. and other countries' capital cities. By this measure, Australia and Oman are both nine hours from Washington, D.C. This last explanatory variable is used for FDI, following Stein and Daube (2004). One expects negative coefficients on these variables----- increased "friction" will lessen economic interaction between trading partners.

The model in this paper uses a dummy variable to account for common language between two trading countries. The dummy equals one if English is the dominant language in a country. The expected sign for this dummy variable is positive since shared language will likely facilitate economic integration.

The level of governance was measured using scores from the World Bank's Governance Index (World Bank (2004a). The governance index reflects six aspects of governance including voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. For the purposes of this paper, the six World Bank indices were combined into a single ranking using a simple arithmetic average.

Table 1 includes descriptive statistics for the data used in the analysis. A slightly different group of countries is available for the goods (149 countries) and FDI (138 countries) estimations as a result of dependent variable availability. The independent variables for these two sub-samples are fairly similar, both in terms of means and standard deviations.

Section 3: Analysis

3.1 Regression Results

Table 2 includes the OLS results for the two dependent variables used to create the rankings of potential FTA partners. The signs on the coefficients (with the exception of the governance rating for FDI) are as expected. The value for the R-squared statistic ranges from 68 to 75 percent, which is typical for applications of the gravity equation to trade data.

The independent variable with the highest predictive power is the size of the foreign economy (ln GDP), the coefficient for which is positive and with a significantly different from zero at a 1 percent level in both regressions. The size of coefficient on this variable in the Goods regression is approximately equal to one (1.05), which is typical of gravity equation results. The value for the FDI regression is even larger (1.27). In contrast, the coefficient on population was negative but statistically insignificant for both the goods and FDI regressions. These two results taken together are weak evidence that countries with higher per capita incomes will have higher goods trade and outward U.S. foreign investment.

We also see evidence that economic "friction" reduces international economic integration. In particular, physical distance between Washington, DC and a foreign trading partner's capital is negatively related (and statistically significant from zero) in the Goods regression. Similarly, the larger the difference in time-zones between the U.S. and the host country, the less likely that U.S. investors will tie up money in direct investment projects abroad.

The remaining two variables demonstrate less explanatory power. The results for the quality of governance as defined by the World Bank varied across subsamples: countries with relatively good governance showed positive correlations for goods trade but were negatively related to FDI (but were statistically insignificantly in both regressions). We also find that the use of English as an official language in the foreign partner was positively correlated with increased economic interaction but that the coefficient was not significantly different from zero.

3.2 Ranking Individual Countries as FTA partners

The regression results were used to create a ranking of potential FTA partners. In particular, the coefficient estimates were multiplied by the appropriate values of explanatory variables for 154 separate countries including Israel, Mexico and Canada, all three of which were party to existing FTAs when the Bush administration took office. This ranking includes some countries for which there are no data for the dependent variable but for which explanatory variable information does exist.

The entire list of individual countries and rankings are included in Table 3. Columns 1 and 2 contain rankings of countries by their actual 2002 levels of bilateral goods with the U.S. and outward U.S. FDI, respectively. Columns 3 and 4 contain fitted values based on the estimated coefficients from regressions reported in Table 2. Column 5 is the ranking for goods trade alone and column 6 is the ranking for U.S. outward FDI. Column 7 is a simple un-weighted average of the previous two columns. Column 8 was created by ranking the averages provided in column 3.

We see that for many countries, ranks derived by considering the actual level of 2002 goods and FDI are quite different than the fitted values. For example, while Mexico is ranked second in actual

goods trade, the fitted value of 15 for goods trade suggests that if other countries had the same low level of bilateral trade restrictions that characterizes U.S.-Mexico economic relations, many other countries would have much higher relative levels of trade. One such country is Switzerland: the actual trade rank for 2002 is 24th compared to a fitted goods rank of 9th. Similarly, South Korea is ranked 19th in terms of 2002 U.S. FDI but would be 9th if U.S. investment in South Korea were similar to "average" FDI, as defined by the predicted values based on the regression coefficients.

The "Fitted Goods Ranking" is dominated by high-income countries. In particular, the top 14 countries in this list are OECD countries, many of them members of the European Union (EU) such as the United Kingdom, Germany, Italy, and France. Among the top 20, only Mexico (15th), Korea (19th) and China (20th) are low- or middle-income countries. India, with a large economy but disproportionately large population, ranks 29th in terms of goods. The results for China and India may be somewhat surprising, given what many analysts would suggest would be enormous trade potential with these growing economies. However, the approach taken in this study is purely static. The rank reflects today's economic potential, not the possible levels of trade as these countries continue to develop.

The "Fitted FDI Ranking" is less dominated by higher-income countries. In particular, the top twenty in this list includes China (7th), Mexico (10th), India (14th), Brazil (17th), and Russia (18th). These results reflect the larger value for the coefficient on GDP in the FDI regressions compared to the goods regressions (1.05 versus 1.25)----larger economies as opposed to richer economies attract U.S. foreign direct investment, at least compared to bilateral goods trade. This probably mirrors U.S. multinational interest to serve large emerging markets with local factories rather than U.S.-sourced exports.

Table 3 also includes an "Overall Fitted Ranking," which was created, as described in Section 1 above, by ordering individual countries by a simple average of the FDI and goods ranking. We find that, by this measure, high-income countries generally dominate the top twenty. No middle or low-income countries are in the top 10; European countries (in particular, EU members plus Switzerland) represent 7 of the top 10 countries in the list. These results suggest that the U.S. would be able to have higher goods trade and FDI if agreements were reached with high-income countries.

These rankings and the importance of GDP in the regression results prompt a question of whether the gravity equation exercise is necessary. In particular, would an alternative ranking of countries simply by the size of the economy or per-capita-GDP have resulted in an ordering substantially similar? We investigate this in Table 4, which includes a ranking of countries based on raw 2002 GDP and per-capita-GDP data. This ranking results in outcomes largely different from the rankings based on the gravity equation estimation. For example, Australia, which ranks 9th in the overall fitted rankings, is ranked 14th and 21st in terms of GDP and GDP-per-capita, respectively. China and India, ranked 12th and 22nd in the fitted rankings, achieve 5th and 11th place, respectively, for overall GDP but 105th and 125th, for GDP-per-capita. Canada, with a raw GDP rank of 7th and per-capita-income rank of 19th, reaches 3rd in the fitted rankings. These, and other specific country results, suggest that a gravity approach, which controls for overall size of the economy and population, but also distance from the U.S. as well as governance quality, can yield important differences from a simple ranking based on raw GDP and population data.

3.3 Rankings Based on Groups of Countries

Individual countries may not be the appropriate groupings in all instances. For example, countries of the EU and Mercosur (Argentina, Brazil, Paraguay, and Uruguay) closely coordinate trade policy as members of customs unions. Consequently, we assign rankings again treating the EU and Mercosur as separate countries[5] since their status as customs unions means that the U.S. would only be able to negotiate an FTA with the entire trade group and not individual countries within the group.

Table 5 includes a subsample of individual country rankings based on this approach. Canada, Israel, and Mexico, all FTA partners at the beginning of the Bush administration, are not included in the rankings of Table 4. Appendix 1 includes the entire rankings based on this approach.

One sees that the top twenty potential partners on the list have a wide variety of levels of economic development and geographical location. The European Union has the highest overall rank (as

[5] For both, we calculated the ranks of these customs unions by summing the GDP and population for the entire customs union, took the unweighted average of governance, distance/time-zone difference, and use of English and then applied the regression coefficients from Table 4.

well as the highest rank for both categories) and followed by Japan. Other OECD countries on the list include Switzerland (3rd), Norway (9th), and New Zealand (17th). The status of the latter three countries is mainly due to their high rankings of potential goods trade, which in turn reflects the important of overall GDP and good governance in the gravity equation estimates for goods.

Middle-income countries are also important potential FTA partners. Mercosur as a group is ranked 7th overall, with FDI as a particularly important factor in the ordering (3rd for FDI versus 10th for goods). South Korea, with a GDP at the higher end of the middle-income range, is tied for 4th overall with high scores for both goods and FDI. China, India, and Turkey also appear in the top twenty countries (4th, 10th, and 14th, respectively).

Several countries with which the United States has recently negotiated bilateral free trade agreements (FTAs) appear relatively high on the list. Australia is tied for 4th with China and South Korea, with goods trade being the more important aspect for its ranking. Singapore and Chile, both of which signed FTA agreements in the U.S. in late 2002, are ranked 10th and 17th, respectively. Thailand, a subject of ongoing negotiations, is ranked 18th while the United Arab Emirates is ranked 24th.

Other countries with which the U.S. has negotiated bilateral FTAs have distinctly lower rankings in terms of the economic consequences of the agreements. Panama comes in at number 46 while Morocco is ranked 37th, just ahead of Kazakhstan, as one can see in Appendix 1. Oman is ranked 33rd just below the Dominican Republic. Jordan and Bahrain are ranked 63rd, out of 125 countries in the EU- and Mercosur-inclusive list and therefore just below Macao. These results, especially for Middle Eastern countries, are certainly consistent with the often-heard view that economic considerations have not played a preeminent role in the decision to choose these countries as free-trade partners. Foreign policy and national security considerations have obviously been more important for the countries in the Middle East. At the signing ceremony for the U.S.- Bahrain Free Trade Agreement, political concerns featured prominently in Ambassador Zoellick's remarks. "Opening trade between the United States and Bahrain is about more than commerce…This agreement is about a government bolstering reformers who are reclaiming the traditions of a greater Islamic past."

As noted above, a number of outside commentators have complained that potentially important FTA partners have thus far been ignored in U.S. strategy. The results here provide some evidence for that claim. Certainly Japan (2nd), Switzerland (3rd), and South Korea (4th) rank far higher than most of the countries chosen by the Bush administration. Hong Kong by itself would be ranked 8th. These results may add support to the argument that the Bush administration's choice of FTA partners has not had as much of an economic impact as it might have. But the choice of partners needs to take into account more than just a particular agreement's possible economic gains. It is also necessary to consider the likelihood of completing the agreement and of enforcing the provisions thereafter. For example, U.S. agreements in the past have taken on a "comprehensive" approach that includes agricultural sectors. Such provisions might be extremely difficult to conclude with Japan, South Korea and Switzerland.

The United States has also concluded regionally-based FTAs with five Central American countries (El Salvador, Costa Rica, Honduras, Nicaragua, and Guatemala), to which the Dominican Republic was added. The U.S. is also in the process of negotiating an FTA with the South African Customs Union (SACU). The results in Appendix 1 shows that no individual member of the CAFTA group of countries rises above 32nd in the overall rankings (with Dominican Republic at 32nd, Guatemala at 45th, El Salvador at 46th, Costa Rica at 48th, Honduras at 61st, and Nicaragua at 86th). South Africa by itself ranks 18th but other members of SACU ranked far lower, which reflects the tiny size of these economies (Botswana----63rd, Namibia---86th, Swaziland--109th, and Lesotho---122nd).

Of course, these two sets of countries should not be considered separately but as a group. Consequently, the independent variables for all members of the CAFTA agreement and SACU negotiations were aggregated. Population and GDP combined for all countries while the other variables were averaged for the group. The estimated coefficients were then applied in the appropriate manner. We see in Table 6 that the resulting rank for the six CAFTA countries considered together was 18th compared to all countries in the EU- and Mercosur-inclusive list in Appendix 1. The SACU group was ranked even further down relative to other countries (21st).

In the rankings of individual countries, SACU, and CAFTA clearly suggest that the Bush FTA initiatives have not focused on the most economically important partners. However, Bush officials, most especially Ambassador Robert Zoellick, have argued that these agreements should not be considered in isolation but should instead be viewed as a whole. Secondly, the individual agreements are intended to be part of a broad strategy of "competitive liberalization."

In order to assess the first justification, we look at a measure of all the Bush FTA initiatives simultaneously. To do this, we aggregate the data for countries with which free trade agreements have been concluded, or are in the process of being concluded, during the Bush administration (up to October 2004). These are: Australia, Bahrain, Bolivia, Botswana, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jordan, Lesotho, Morocco, Namibia, Nicaragua, Panama, Peru, Singapore, South Africa, Swaziland, and Thailand. We find in Table 6 that the combined Bush FTA initiative group, taken as a whole, would rank 6th in terms of goods and 3rd in terms of FDI. Thus, these agreements as a whole have relatively important potential benefits, even if the agreements in isolation may be unimportant.

The Bush administration has also offered a second justification for the increased number of FTAs. In particular, Ambassador Zoellick argues that the prospect of the U.S. agreeing to negotiate a FTA with one country might spur others to more cooperative actions in broader trade talks. For example, some analysts have pointed to the U.S. negotiating a FTA with Canada and then Mexico as an important impetus to the successful conclusion of the Uruguay Round.

One can see echoes of this strategy in the U.S. approach to trade agreements in Latin America. The U.S. has slowly added more and more countries that are potential members of the Free Trade Agreement of the Americas to the list of bilateral FTA partners (including Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and Peru). One interpretation of these choices is that the U.S. is putting more and more pressure on Brazil to make important compromises in the negotiations. If the U.S. has bilateral FTAs with every country

except Brazil (and perhaps other members of Mercosur), so the argument goes, then Brazil might decide to make more concessions.

Table 6 also contains a ranking for the FTAA countries.[6] We see that this methodology suggests that an FTAA increases trade and investment slightly more than does the entire set of new Bush administration initiatives. FTAA countries would rank 6th overall in terms of goods and 3rd overall in terms of FDI, but with values only slightly ahead of the aggregate Bush FTA initiatives. However, one must be careful with this comparison since a number of new FTA negotiations are with countries that would also be in an FTAA. Thus, the net additional benefits of an FTAA would be primarily from Mercosur, and that primarily from Brazil.

We can use this framework to evaluate the importance of another Bush administration initiative in the Middle East. The Administration announced in 2003 that it would undertake a long-term effort to conclude a regional trade agreement with predominately Arab-speaking Muslim countries stretching from Morocco eastwards towards and including Iraq.

This effort, which would be known as the Middle East Free Trade Agreement (MEFTA) upon completion, could have more economic importance. To make this evaluation, we aggregated the following countries to rank the potential economic importance of a successful conclusion of a MEFTA: Algeria, Bahrain, Egypt, Jordan, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, and the United Arab Emirates.[7]

We find that this group of countries, with a combined 2002 population and GDP of 234 million and U.S.$626 billion, respectively, would rank 11th in potential trade (just behind Mercosur) and 6th in investment flows (almost equal to South Korea). Thus, while the prime motivation for MEFTA may be part of a broader foreign policy initiative to encourage reform in that part of the world, the potential economic impact of these countries as a whole is significant, and certainly larger than other individual Bush administration initiatives.

[6] This ranking does not include Canada, Mexico, and Chile, all of which currently have FTAs with the U.S.
[7] Thus, the ranking includes a few countries with which the US has already completed agreements (Jordan, Bahrain, and Morocco).

However, it is clear from early decisions about MEFTA that this will not take place in one multilateral negotiation, as with the FTAA. Instead, the Bush administration is launching individual bilateral FTAs, presumably to work up to a broader regional FTA sometime in the future. We can use the results in Appendix 1 to assess the goods, services, and investment trade potential for MEFTA partners. In purely economic terms, Saudi Arabia would rank highest (15th), followed by the United Arab Emirates (24th) and Egypt (25th). For the remaining potential MEFTA members, the overall rankings are: Algeria (30th), Oman (33rd), Morocco (37th), Qatar (38th), Tunisia (42nd), Syria (53rd), Libya (57th), Lebanon (58th), Sudan (67th), and Bahrain and Jordan (tied for 63rd).[8]

These rankings suggest that the early MEFTA partners (Bahrain, Jordan, and Morocco) were not chosen because they were economically the most important, but instead were chosen for other reasons. One possible consideration is foreign policy, since Morocco and Jordan have in the past served as helpful partners in the Middle East peace process. Alternatively, the administration might be negotiating with countries for which it is relatively easy to conclude an agreement. The outstanding issues are simpler for smaller, less politically sensitive countries; it is certainly believable that negotiating a FTA with Bahrain would be far easier than one with countries like Egypt and Saudi Arabia that involve very difficult economic, political and social considerations.

Finally, we can use the framework to consider one other possible combination of countries for a regional FTA. In particular, the individual rankings suggest that member countries of the European Free Trade Association (EFTA) are potentially important partners. To assess this, we aggregate the data for Switzerland, Norway, Lichtenstein, and Iceland and apply the same procedures. Table 6 shows that this group would rank highest among the new groups of countries assessed and third only to the EU and Japan. The potential for FDI is less striking, with a rank of 6. These results suggest that the U.S. could potentially gain more economically if FTAs were negotiated with this group of countries instead of smaller economies of Latin America and Asia, especially if goods trade rather than foreign investment flows were foremost in policy-makers' minds.

[8] No data on Iraq was available for 2002.

4. Conclusions and Caveats

In this paper, we seek to provide a rank ordering of potential U.S. free trade partners. This ranking was based on estimating the "average" contribution of various standard explanatory variables to bilateral aggregate goods and services trade as well as U.S. outward foreign direct investment. These relationships were estimated separately using the gravity equation, a standard method in the empirical trade literature. The estimated parameters were applied to economic data of 154 countries in order to rank each individual country. We also used these parameters on aggregate data from various groups of countries to assess their overall rank as a group.

These rankings can then be used to evaluate how important recent U.S. free trade partners have been separately and in combination. We can also use the results to consider various possible combinations of countries.

We found that Japan ranked 1st in terms of FDI and 3rd in goods trade. The United Kingdom also ranked high (2nd in goods, and 3rd in FDI), as did Germany (4th in goods and 2nd in FDI). Brazil, the largest economy in the Western Hemisphere without a FTA agreement with the United States, ranked 17th in FDI and 24th in goods trade.

However, it is clear that the U.S. is highly unlikely to negotiate a free trade agreement with any one member of the European Union or separately with Brazil. Thus, when the 25 countries of the European Union and the countries of Mercosur were combined and treated as single "countries," the EU ranked first in both categories. The EU was, therefore, first overall compared to 7th place for Mercosur as a whole. Japan ranked 2nd in overall standings.

We also found that individual Bush administration FTA initiatives were generally focused on economically insignificant potential partners, except Australia, which ranked fourth when the EU and Mercosur were each considered as one entity. However, the combined effects of all of the new Bush FTA initiatives taken together ranked relatively high. This suggests that the overall effects of the Bush

approach potentially have important aggregate effects, even if the impact of individual FTAs are less than overwhelming.

This study is not without significant limitations. The results provide relative rankings of trade and investment flows but cannot be used for other purposes. For example, the rankings cannot be interpreted as ranking the economic welfare effects of the various FTA partners nor the impact on U.S. GDP. They also provide no insight into whether any individual FTA would yield net benefits to the U.S. since the gravity equation cannot be used to assess resource allocation effects nor trade diversion effects. Finally, the model cannot be used to answer a more fundamental and important question---do these potential FTAs act as a stumbling block or stepping stone to completion of multilateral trade talks.

Nonetheless, the results of this study can provide some insights into the relative importance of various bilateral FTAs, including small countries that have not been analyzed using more detailed and comprehensive computable general equilibrium models. It is true that a subset of countries could be analyzed (and have been analyzed) using CGEs. However, the lack of relevant data on many small economies, some of which have been the focus of recent U.S. FTA negotiations, means that a gravity equation approach may be the only consistent method used for all of the countries in this study. Thus, the gravity equation approach adopted here can help trade analysts compare the effects of a host of heretofore unexamined FTAs with the U.S.

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Table 1

	Dependent variable	
	Goods	**FDI**
GDP	146,623	158,795
	433,021	449,808
Population (1,000s)	37,811	40,559
	137,727	143,384
Distance to capital (kilometers)	8,685	
	3,596	
Governance (scale from -2 to 2)	0.06	0.09
	0.93	0.92
Time zone difference (hours)		6.07
		3.32
English	0.12	0.13
	0.33	0.33
Goods Trade	12,456	
	41,388	
U.S. FDI		10,412
		31,006
Countries in sample	149	138

First row: mean Second row: standard deviation

Variables denominated in million U.S.$ unless otherwise noted.

Table 2

Explanatory Variable	Dependent Variable: Goods	Dependent Variable: FDI
Ln GDP	1.05***	1.27***
	(0.12)	(0.09)
Ln Population	-0.12	-0.11
	(0.12)	(0.09)
Ln Distance	-0.53***	
	(0.19)	
Time zone Difference		-0.12***
		(0.05)
English Dummy	0.19	0.45
	(0.31)	(0.52)
Average Governance Rating	0.04	-0.21
	(0.20)	(0.17)
Intercept	2.32	-4.92***
	(1.73)	(0.83)
R-squared	0.75	0.68
Observations	148	137

***, **, *** = Statistically different from zero at 10%, 5%, and 1%, respectively**

			Table 3: Individual Country Ranking					
	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
Country	**Actual Goods Ranking**	**Actual FDI Ranking**	**Log of fitted goods**	**Log of fitted FDI**	**Fitted Goods Ranking**	**Fitted FDI Ranking**	**Average Fitted Ranking**	**Overall Fitted Ranking**
			$\ln T_i[\underline{t}^*]$	$\ln F_i[\underline{f}^*]$				
Japan	3	5	10.71	12.75	3	1	2.0	1
United Kingdom	6	1	10.78	11.31	2	3	2.5	2
Germany	5	6	10.70	11.61	4	2	3.0	3
Canada	1	2	11.14	11.16	1	5	3.0	3
Italy	11	15	9.55	11.16	6	4	5.0	5
France	9	10	10.15	10.62	5	6	5.5	6
Spain	28	16	9.36	9.87	8	8	8.0	7
Switzerland	24	4	9.13	9.64	9	11	10.0	8
Australia	19	12	8.98	9.34	10	12	11.0	9
Netherlands	14	3	9.50	9.06	7	15	11.0	9
Mexico	**2**	**9**	**8.59**	**9.83**	**15**	**10**	**12.5**	**11**
China	**4**	**23**	**7.89**	**10.15**	**20**	**7**	**13.5**	**12**
Korea, South	**7**	**19**	**8.30**	**9.85**	**19**	**9**	**14.0**	**13**
Sweden	26	18	8.92	8.68	11	20	15.5	14
Belgium +Luxembourg	16	8	8.72	8.64	13	22	17.5	15
Hong Kong	17	13	7.79	9.34	23	13	18.0	16
Austria	38	36	8.57	8.65	16	21	18.5	17
Portugal	57	41	7.82	8.90	22	16	19.0	18
Denmark	43	26	8.66	8.57	14	25	19.5	19
Norway	32	28	8.73	8.38	12	28	20.0	20
Brazil	**15**	**14**	**7.64**	**8.89**	**24**	**17**	**20.5**	**21**
India	**25**	**39**	**7.05**	**9.32**	**29**	**14**	**21.5**	**22**
Singapore	12	7	7.38	8.68	26	19	22.5	23

Finland	40	55	8.45	8.29	17	31	24.0	24
Russia	**29**	**64**	**6.77**	**8.88**	**31**	**18**	**24.5**	**25**
Poland	62	32	7.47	8.60	25	24	24.5	25
Taiwan	8	24	7.88	8.31	21	30	25.5	27
Ireland	13	11	8.38	7.84	18	36	27.0	28
Turkey	34	49	6.40	8.61	38	23	30.5	29
Greece	64	60	7.31	7.99	28	34	31.0	30
Chile	36	20	6.95	7.74	30	37	33.5	31
Saudi Arabia	23	38	6.63	8.21	35	33	34.0	32
New Zealand	46	34	7.32	7.60	27	41	34.0	32
Israel	21	31	6.77	7.67	32	40	36.0	34
Colombia	30	37	5.66	8.40	46	27	36.5	35
Malaysia	10	25	6.16	8.27	41	32	36.5	35
Thailand	18	29	6.23	7.86	39	35	37.0	37
South Africa	35	40	6.44	7.72	37	38	37.5	38
Indonesia	27	27	5.34	8.51	53	26	39.5	39
Venezuela	20	22	5.77	7.69	43	39	41.0	40
Hungary	53	46	6.71	7.04	33	50	41.5	41
United Arab Emirates	44	54	6.49	7.24	36	48	42.0	42
Argentina	42	21	5.59	7.60	47	42	44.5	43
Egypt	45	44	5.52	7.60	50	43	46.5	44
Cuba	115	NA*	5.18	7.33	55	46	50.5	45
Romania	71	71	5.36	7.16	52	49	50.5	45
Peru	49	42	5.53	6.73	48	54	51.0	47
Philippines	22	35	5.27	7.03	54	51	52.5	48
Kuwait	56	67	5.52	6.50	49	58	53.5	49
Slovenia	87	98	5.81	6.09	42	65	53.5	49
Algeria	52	45	4.88	7.41	63	45	54.0	51
Dominican Republic	31	58	5.14	6.66	57	57	57.0	52
Oman	77	78	5.09	6.67	59	56	57.5	53
Czech Republic	60	56	6.69	5.29	34	82	58.0	54

Iceland	81	NA*	6.20	5.42	40	79	59.5	55
Croatia	107	94	5.12	6.22	58	62	60.0	56
Slovak Republic	92	87	5.47	5.70	51	70	60.5	57
Cyprus	108	77	4.87	6.50	64	59	61.5	58
Bangladesh	58	75	4.22	7.52	80	44	62.0	59
Qatar	76	48	5.02	6.22	61	63	62.0	59
Morocco	70	73	5.17	5.85	56	68	62.0	59
Kazakhstan	72	33	4.22	7.33	81	47	64.0	62
Ecuador	47	59	4.48	7.01	76	52	64.0	62
Pakistan	54	63	4.45	6.99	77	53	65.0	64
El Salvador	48	65	4.62	6.19	70	64	67.0	65
Tunisia	100	93	4.77	5.89	67	67	67.0	65
Ukraine	78	72	4.54	6.32	74	61	67.5	67
Guatemala	41	68	4.74	5.80	69	69	69.0	68
Panama	63	17	4.81	5.58	65	75	70.0	69
Lithuania	89	97	5.00	5.35	62	80	71.0	70
Nigeria	33	50	3.91	6.71	89	55	72.0	71
Costa Rica	37	52	5.70	4.68	45	99	72.0	71
Bulgaria	85	86	4.58	5.47	72	78	75.0	73
Serbia and Montenegro	126	113	3.74	6.32	92	60	76.0	74
Bahamas	66	30	5.75	4.22	44	110	77.0	75
Vietnam	55	81	4.21	5.65	82	72	77.0	76
Congo, Demo Rep. (Zaire, Kinshasa)	103	90	2.13	8.38	126	29	77.5	77
Syria	88	NA*	3.87	5.95	90	66	78.0	78
Trinidad & Tobago	51	47	4.75	4.92	68	88	78.0	79
Sri Lanka	59	109	4.07	5.50	86	76	81.0	80
Libya	145	103	3.66	5.66	94	71	82.5	81
Uruguay	90	62	4.78	4.65	66	101	83.5	82
Lebanon	91	91	4.10	5.29	85	83	84.0	83
Jamaica	61	43	4.57	4.69	73	95	84.0	83

Bermuda	86	NA*	5.07	4.28	60	108	84.0	83
Honduras	39	79	3.54	5.58	96	74	85.0	86
Latvia	101	NA*	4.32	4.74	78	94	86.0	87
Estonia	105	107	4.54	4.66	75	100	87.5	88
Macao	67	133	4.01	4.89	87	92	89.5	89
Belarus	116	131	3.38	5.19	98	84	91.0	90
Jordan	74	NA*	3.74	4.92	93	89	91.0	90
Botswana	132	112	3.83	4.91	91	91	91.0	90
Sudan	148	117	2.75	5.62	110	73	91.5	93
Malta and Gozo	80	99	4.28	4.32	79	106	92.5	94
Bahrain	75	100	4.19	4.60	83	103	93.0	95
Bolivia	93	82	3.39	4.91	97	90	93.5	96
Angola	50	61	2.56	5.47	113	77	95.0	97
Barbados	99	53	4.59	3.81	71	120	95.5	98
Cameroon	95	70	2.85	5.18	108	85	96.5	99
Ivory Coast	84	80	2.95	4.95	106	87	96.5	99
Brunei	94	NA*	3.94	4.17	88	111	99.5	101
Zimbabwe	114	85	2.36	5.30	120	81	100.5	102
Tanzania	127	114	2.90	4.69	107	97	102.0	103
Azerbaijan	122	57	2.41	5.12	119	86	102.5	104
Kenya	83	115	2.97	4.47	105	104	104.5	105
Ghana	97	74	3.08	4.22	101	109	105.0	106
Paraguay	82	89	2.44	4.76	118	93	105.5	107
Uzbekistan	109	83	2.46	4.69	117	96	106.5	108
Uganda	137	130	2.50	4.69	115	98	106.5	108
Albania	144	124	2.76	4.37	109	105	107.0	110
Gabon	65	66	2.99	4.11	104	114	109.0	111
Senegal	129	106	3.09	3.89	100	118	109.0	111
Mauritius	98	NA*	3.55	3.77	95	124	109.5	113
Bosnia-Herzegovina	134	121	2.71	4.13	111	113	112.0	114
Namibia	119	NA*	3.00	3.77	103	122	112.5	115

Nicaragua	68	76	3.14	3.70	99	126	112.5	115
Macedonia	125	126	2.59	3.92	112	117	114.5	117
Liechtenstein	104	NA*	4.12	1.97	84	147	115.5	118
Haiti	73	108	2.09	4.31	127	107	117.0	119
Nepal	113	128	2.28	4.16	122	112	117.0	119
Turkmenistan	121	101	1.81	4.63	133	102	117.5	121
Zambia	135	105	2.24	4.06	123	116	119.5	122
Antigua and Barbuda	NA**	92	3.00	2.84	102	137	119.5	122
Ethiopia	128	102	2.15	3.87	124	119	121.5	124
Mali	147	NA*	2.35	3.77	121	123	122.0	125
St. Kitts	NA**	NA*	2.47	3.03	116	132	124.0	126
Belize	110	88	2.55	2.99	114	134	124.0	126
Georgia	118	69	1.80	4.06	134	115	124.5	128
Mozambique	123	118	2.06	3.79	129	121	125.0	129
Fiji	112	110	2.07	3.11	128	130	129.0	130
Cambodia	69	135	2.00	3.28	131	129	130.0	131
Niger	136	NA*	1.63	3.76	138	125	131.5	132
Papua New Guinea	120	111	1.70	3.50	135	128	131.5	132
Equatorial Guinea	79	51	1.43	3.68	143	127	135.0	134
Suriname	102	95	2.04	2.57	130	141	135.5	135
Grenada	NA**	123	2.14	1.67	125	149	137.0	136
Swaziland	117	NA*	1.40	3.02	144	133	138.5	137
Malawi	124	NA*	1.45	2.89	142	135	138.5	137
Moldova	131	137	1.67	2.46	136	142	139.0	139
Congo, Rep of (Brazzaville)	111	96	0.61	3.03	149	131	140.0	140
Guyana	106	84	1.52	2.70	141	139	140.0	140
Togo	146	120	1.16	2.87	145	136	140.5	142
Kyrgyz Republic	138	134	1.09	2.74	146	138	142.0	143
Seychelles	139	129	1.58	1.99	140	145	142.5	144
St. Lucia	NA**	116	1.86	1.18	132	153	142.5	144
Mauritania	143	136	1.62	1.94	139	148	143.5	146

Bhutan	NA**	127	1.07	2.40	147	143	145.0	147
Dominica	NA**	104	1.66	0.84	137	154	145.5	148
Sierra Leone	141	119	0.26	2.70	152	140	146.0	149
Tajikistan	140	NA*	0.47	2.20	150	144	147.0	150
Lesotho	96	132	0.82	1.57	148	150	149.0	151
Liberia	130	NA*	-0.40	1.97	154	146	150.0	152
Djibouti	133	122	0.34	1.35	151	152	151.5	153
Eriteria	142	NA*	0.12	1.45	153	151	152.0	154

Table 4

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Country	**GDP (million 2002 US$)**	**Population (thousands)**	**GDP/capita (2002 US$)**	**Raw GDP/capita Ranking**	**Overall Fitted Ranking**	**Raw GDP Ranking**
Japan	3,993,433	127,150	31,407	6	1	1
Germany	1,984,095	82,495	24,051	17	3	2
United Kingdom	1,563,700	59,229	26,401	11	2	3
France	1,431,278	59,485	24,061	16	6	4
China	1,266,052	1,280,400	989	105	12	5
Italy	1,184,273	57,690	20,528	22	5	6
Canada	714,327	31,362	22,777	19	3	7
Spain	653,075	40,917	15,961	26	7	8
Mexico	648,458	100,819	6,432	46	11	9
Korea, South	546,713	47,640	11,476	35	13	10
India	510,177	1,048,641	487	125	22	11
Brazil	460,787	174,485	2,641	75	21	12
Netherlands	417,910	16,144	25,886	12	9	13
Australia	408,975	19,663	20,799	21	9	14
Russia	345,589	144,071	2,399	77	25	15
Taiwan	296,000	22,603	13,096	32	27	16
Switzerland	267,445	7,290	36,687	3	8	17
Belgium +Luxembourg	266,420	10,777	24,721	15	15	18
Sweden	240,313	8,924	26,929	10	14	19
Austria	204,066	8,048	25,356	13	17	20
Poland	191,310	38,232	5,004	49	25	21
Norway	190,477	4,538	41,974	2	20	22
Saudi Arabia	188,479	21,886	8,612	41	32	23
Turkey	183,888	69,626	2,641	74	29	24
Indonesia	172,974	211,716	817	115	39	25

Denmark	172,928	5,374	32,179	5	19	26
Hong Kong	161,531	6,787	23,800	18	16	27
Greece	132,824	10,631	12,494	33	30	28
Finland	131,508	5,199	25,295	14	24	29
Thailand	126,905	61,613	2,060	84	37	30
Portugal	121,595	10,177	11,948	34	18	31
Ireland	121,449	3,920	30,982	7	28	32
South Africa	106,347	45,345	2,345	78	38	33
Israel	103,689	6,566	15,792	27	34	34
Argentina	102,042	36,480	2,797	72	43	35
Malaysia	94,910	24,305	3,905	60	35	36
Venezuela	94,340	25,090	3,760	62	40	37
Egypt	89,854	66,372	1,354	100	44	38
Singapore	88,275	4,164	21,200	20	23	39
Colombia	80,595	43,733	1,843	91	35	40
Philippines	77,954	79,944	975	106	48	41
United Arab Emirates	70,960	3,754	18,903	23	42	42
Czech Republic	69,514	10,201	6,814	45	54	43
Chile	67,366	15,589	4,321	53	31	44
Hungary	64,914	10,159	6,390	47	41	45
Pakistan	59,235	144,902	409	128	64	46
New Zealand	58,364	3,939	14,817	30	32	47
Peru	56,517	26,749	2,113	83	47	48
Algeria	55,914	31,320	1,785	93	51	49
Bangladesh	47,563	135,684	351	136	59	50
Romania	45,749	22,300	2,052	85	45	51
Ukraine	42,393	48,717	870	112	67	52
Nigeria	41,528	132,785	313	138	71	53
Morocco	36,093	29,641	1,218	102	59	54
Kuwait	35,369	2,328	15,193	29	49	55
Vietnam	35,086	80,424	436	127	76	56

Cuba	30,690	11,263	2,725	73	45	57
Kazakhstan	24,637	14,854	1,659	94	62	58
Ecuador	24,311	12,818	1,897	89	62	59
Slovak Republic	24,184	5,379	4,496	51	57	60
Guatemala	23,252	11,992	1,939	87	68	61
Croatia	22,763	4,465	5,098	48	56	62
Slovenia	21,960	1,964	11,181	36	49	63
Dominican Republic	21,285	8,613	2,471	76	52	64
Tunisia	21,024	9,781	2,149	82	65	65
Syria	20,783	16,986	1,224	101	78	66
Oman	20,309	2,538	8,002	43	53	67
Libya	19,131	5,448	3,512	68	81	68
Lebanon	18,263	4,441	4,112	57	83	69
Qatar	17,466	610	28,633	9	59	70
Costa Rica	16,837	3,942	4,271	54	71	71
Sri Lanka	16,567	19,007	872	111	80	72
Serbia and Montenegro	15,681	8,160	1,922	88	74	73
Bulgaria	15,568	7,868	1,979	86	73	74
Sudan	15,376	32,791	469	126	93	75
Belarus	14,304	9,925	1,441	98	90	76
El Salvador	14,284	6,417	2,226	79	65	77
Lithuania	14,056	3,469	4,052	59	70	78
Kenya	12,330	31,345	393	131	105	79
Panama	12,296	2,940	4,182	55	69	80
Uruguay	12,277	3,361	3,653	65	82	81
Ivory Coast	11,692	16,513	708	118	99	82
Angola	11,248	13,121	857	113	97	83
Cyprus	10,106	765	13,210	31	58	84
Cameroon	9,855	15,769	625	122	99	85
Uzbekistan	9,688	25,271	383	133	108	86
Tanzania	9,375	35,181	266	143	103	87

Trinidad & Tobago	9,372	1,304	7,187	44	79	88
Jordan	9,301	5,171	1,799	92	90	89
Iceland	8,449	284	29,750	8	55	90
Latvia	8,406	2,338	3,595	66	87	91
Zimbabwe	8,304	13,001	639	121	102	92
Jamaica	7,871	2,617	3,008	71	83	93
Bolivia	7,801	8,809	886	110	96	94
Bahrain	7,683	698	11,007	37	95	95
Macao	6,765	439	15,410	28	89	96
Honduras	6,594	6,797	970	107	86	97
Estonia	6,507	1,358	4,792	50	88	98
Brunei	6,500	351	18,519	24	101	99
Azerbaijan	6,236	8,172	763	116	104	100
Ghana	6,160	19,908	309	139	106	101
Ethiopia	6,059	67,218	90	153	124	102
Uganda	5,803	24,600	236	144	108	103
Bosnia-Herzegovina	5,599	4,112	1,362	99	114	104
Paraguay	5,594	5,510	1,015	104	107	105
Congo, Demo Rep. (Zaire, Kinshasa)	5,547	3,657	1,517	96	77	106
Nepal	5,494	24,125	228	145	119	107
Botswana	5,288	1,712	3,089	69	90	108
Bahamas	5,050	314	16,083	25	75	109
Senegal	5,037	10,007	503	124	111	110
Gabon	4,971	1,315	3,780	61	111	111
Albania	4,835	3,150	1,535	95	110	112
Turkmenistan	4,606	4,793	961	108	121	113
Mauritius	4,532	1,212	3,739	63	113	114
Cambodia	4,005	13,172	304	140	131	115
Nicaragua	4,003	5,342	749	117	115	116
Malta and Gozo	3,870	397	9,748	39	94	117

Macedonia	3,791	2,038	1,860	90	117	118
Zambia	3,697	10,244	361	135	122	119
Mozambique	3,599	18,438	195	146	129	120
Georgia	3,392	5,177	655	120	128	121
Haiti	3,294	8,286	398	130	119	122
Mali	3,163	11,374	278	142	125	123
Congo, Rep of (Brazzaville)	3,017	51,580	58	154	140	124
Namibia	2,904	1,985	1,463	97	115	125
Papua New Guinea	2,863	5,378	532	123	132	126
Barbados	2,535	269	9,424	40	98	127
Bermuda	2,250	63	35,714	4	83	128
Niger	2,171	11,425	190	148	132	129
Equatorial Guinea	2,118	482	4,394	52	134	130
Malawi	1,880	10,743	175	149	137	131
Fiji	1,815	823	2,205	80	130	132
Liechtenstein	1,800	33	54,878	1	118	133
Moldova	1,662	4,255	391	132	139	134
Kyrgyz Republic	1,603	5,004	320	137	143	135
Togo	1,384	4,760	291	141	142	136
Tajikistan	1,212	6,265	193	147	150	137
Swaziland	1,186	1,088	1,090	103	137	138
Mauritania	991	2,630	377	134	146	139
Suriname	952	433	2,199	81	135	140
Belize	928	253	3,668	64	126	141
Sierra Leone	783	5,235	150	151	149	142
Guyana	722	766	943	109	140	143
Lesotho	714	1,777	402	129	151	144
Antigua and Barbuda	710	69	10,290	38	122	145
Seychelles	699	82	8,479	42	144	146
St. Kitts	660	159	4,151	56	126	147
Bhutan	594	851	698	119	147	148

Djibouti	592	693	854	114	153	149
Eriteria	582	4,297	135	152	154	150
Liberia	562	3,295	171	150	152	151
Grenada	414	102	4,059	58	136	152
St. Lucia	361	117	3,085	70	144	153
Dominica	254	72	3,528	67	148	154

Source: World Development Indicators, World Bank

Table 5

	Col. 1	Col. 2	Col. 3
Country	**Goods rank**	**FDI rank**	**Overall rank**
EU	1	1	1
Japan	2	2	2
Switzerland	3	6	3
China	7	4	4
Australia*	4	7	4
Korea, South	6	5	4
Mercosur	10	3	7
Hong Kong	9	8	8
Norway	5	15	9
India	13	9	10
Singapore	11	11	10
Taiwan	8	17	12
Russia	15	10	12
Turkey	19	12	14
Saudi Arabia	16	19	15
Chile	14	21	15
New Zealand	12	24	17
Malaysia	22	18	18
Thailand	20	20	18
Colombia	26	14	18
Indonesia	31	13	22
Venezuela	23	23	23
United Arab Emirates	17	30	24
Egypt	29	25	25
Algeria	40	27	30

Oman	37	37	33
Morocco	34	47	37
Pakistan	51	34	41
Panama	41	53	46
Jordan	65	65	63
Bahrain	55	75	63

*The US has negotiated, or is currently negotiating, bilateral FTAs with individual countries in bold.

Not included in this ranking: Canada, Israel, and Mexico
Mercosur includes: Argentina, Brazil, Paraguay, and Uruguay
EU includes the current 25 members of the European Union

Table 6

	Rankings versus all other countries*			
	Goods		FDI	
	Col. 1	Col. 2	Col. 3	Col. 4
	Goods rank	Goods Fitted Value (ln)	FDI rank	FDI Fitted Value (ln)
Bush FTA (aggregated)	6	8.62	3	10.94
CAFTA + Dominican Republic	20	6.33	19	8.26
EFTA	3	9.62	6	9.69
FTAA	6	8.68	3	11.19
MEFTA	11	7.57	6	9.84
SACU	21	6.25	20	8.13

**** Each country grouping was ranked against other country groupings**

Appendix 1: Fitted Ranking with EU and Mercosur

	Col. 1	Col. 2	Col. 3	Col. 4
Country	**Goods rank**	**FDI rank**	**Average* rank**	**Overall rank**
EU	1	1	1.0	1
Japan	2	2	2.0	2
Switzerland	3	6	4.5	3
Australia	4	7	5.5	4
China	7	4	5.5	4
Korea, South	6	5	5.5	4
Mercosur	10	3	6.5	7
Hong Kong	9	8	8.5	8
Norway	5	15	10.0	9
India	13	9	11.0	10
Singapore	11	11	11.0	10
Russia	15	10	12.5	12
Taiwan	8	17	12.5	12
Turkey	19	12	15.5	14
Chile	14	21	17.5	15
Saudi Arabia	16	19	17.5	15
New Zealand	12	24	18.0	17
Colombia	26	14	20.0	18
Malaysia	22	18	20.0	18
South Africa	18	22	20.0	18
Thailand	20	20	20.0	18
Indonesia	31	13	22.0	22
Venezuela	23	23	23.0	23
United Arab Emirates	17	30	23.5	24
Egypt	29	25	27.0	25
Cuba	33	28	30.5	26
Romania	30	31	30.5	26
Peru	27	35	31.0	28
Philippines	32	32	32.0	29
Algeria	40	27	33.5	30
Kuwait	28	39	33.5	30
Dominican Republic	35	38	36.5	32
Oman	37	37	37.0	33
Bangladesh	52	26	39.0	34
Croatia	36	42	39.0	34

Iceland	21	57	39.0	34
Morocco	34	47	40.5	37
Kazakhstan	53	29	41.0	38
Qatar	39	43	41.0	38
Ecuador	50	33	41.5	40
Pakistan	51	34	42.5	41
Tunisia	42	46	44.0	42
El Salvador	45	44	44.5	43
Ukraine	49	41	45.0	44
Guatemala	44	48	46.0	45
Panama	41	53	47.0	46
Nigeria	61	36	48.5	47
Costa Rica	25	73	49.0	48
Bulgaria	47	56	51.5	49
Serbia and Montenegro	64	40	52.0	50
Vietnam	54	50	52.0	50
Bahamas	24	81	52.5	52
Syria	62	45	53.5	53
Trinidad & Tobago	43	64	53.5	54
Sri Lanka	58	54	56.0	55
Congo, Demo Rep. (Zaire, Kinshasa)	97	16	56.5	56
Libya	66	49	57.5	57
Lebanon	57	59	58.0	58
Bermuda	38	79	58.5	59
Jamaica	48	69	58.5	59
Honduras	68	52	60.0	61
Macao	59	68	63.5	62
Bahrain	55	75	65.0	63
Belarus	70	60	65.0	63
Botswana	63	67	65.0	63
Jordan	65	65	65.0	63
Sudan	82	51	66.5	67
Bolivia	69	66	67.5	68
Barbados	46	91	68.5	69
Angola	85	55	70.0	70
Cameroon	80	61	70.5	71
Ivory Coast	78	63	70.5	72
Brunei	60	82	71.0	73
Zimbabwe	91	58	74.5	74
Tanzania	79	71	75.0	75
Azerbaijan	90	62	76.0	76
Ghana	73	80	76.5	77
Kenya	77	76	76.5	78

Albania	81	77	79.0	79
Uganda	87	72	79.5	80
Uzbekistan	89	70	79.5	80
Gabon	76	85	80.5	82
Senegal	72	89	80.5	82
Mauritius	67	95	81.0	84
Bosnia-Herzegovina	83	84	83.5	85
Namibia	75	93	84.0	86
Nicaragua	71	97	84.0	86
Macedonia	84	88	86.0	88
Liechtenstein	56	118	87.0	89
Haiti	98	78	88.0	90
Nepal	93	83	88.0	90
Turkmenistan	104	74	89.0	92
Zambia	94	87	90.5	93
Antigua and Barbuda	74	108	91.0	94
Ethiopia	95	90	92.5	95
Mali	92	94	93.0	96
Belize	86	105	95.5	97
Georgia	105	86	95.5	97
St. Kitts	88	103	95.5	97
Mozambique	100	92	96.0	100
Fiji	99	101	100.0	101
Cambodia	102	100	101.0	102
Niger	109	96	102.5	103
Papua New Guinea	106	99	102.5	103
Equatorial Guinea	114	98	106.0	105
Suriname	101	112	106.5	106
Grenada	96	120	108.0	107
Malawi	113	106	109.5	108
Swaziland	115	104	109.5	109
Moldova	107	113	110.0	110
Congo, Rep of (Brazzaville)	120	102	111.0	111
Guyana	112	110	111.0	111
Togo	116	107	111.5	113
Kyrgyz Republic	117	109	113.0	114
Seychelles	111	116	113.5	115
St. Lucia	103	124	113.5	115
Mauritania	110	119	114.5	117
Bhutan	118	114	116.0	118
Dominica	108	125	116.5	119
Sierra Leone	123	111	117.0	120
Tajikistan	121	115	118.0	121

Lesotho	119	121	120.0	122
Liberia	125	117	121.0	123
Djibouti	122	123	122.5	124
Eritrea	124	122	123.0	125

Not included in this ranking: Canada, Israel, and Canada
Mercosur includes: Argentina, Brazil, Paraguay, and Uruguay
EU includes the current 25 members of the European Union